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SECURITY INFORMATION

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

2 May 1952

SUBJECT: Feasibility of Determining Current Crop Conditions in the USSR

1. Under the assumption that the weather information available in the event of hostilities in 1954 is roughly comparable to that being received at the present time, it is believed that it will be possible to predict, within a relatively narrow range, the stage of development of the various cereal crops in the USSR.

Unclassified data are available from which maps can be prepared showing the dates on which various percentages of the cereal crops in the USSR have been sown -- for example, a map showing by regions the dates on which 75 percent of the spring wheat has been sown. Having the current weather information for 1954, it will be possible to determine whether the spring is early or late and to deduce therefrom the probable dates by which a specified percentage of cereal crops will have been sown in the major grain producing areas. With the probable date of seeding as a base, it will be possible by following weather conditions ~~subsequent~~ to this date to predict at any specified time the stage of development within a certain range. This range of estimation will depend on the time the estimate is to be made. In any specified region the approximate dates for the beginning and ending of seeding often cover a period of 1½ months (for example, 1 April to 15 May for spring wheat in the Lower Volga), whereas the corresponding dates for harvesting cover only about 3 weeks (10 July to 10 August for Lower Volga). In other words, crops sown later than average will also be harvested later, but the time lag at each successive stage of development becomes increasingly less as the crop season progresses. It is believed that near the beginning of the growing season it will be possible to predict the stage of development within an approximate range of plus or minus 10 days. As the growing season progresses, it is felt that this range may be successively narrowed for any specified locality, perhaps down to plus or minus 5 days. It should be stressed, however, that in order to obtain timeliness in the estimate, it will be necessary to have extremely current weather information -- probably not more than a week lag at the very most. It is felt that such an estimate, based on current weather information, will be considerably more reliable than an estimate based on averages only.

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In addition, at the present time information on the stage of development of cereal crops in the USSR is being obtained. Similar information is available for the past several years and presumably will be available at least until the outbreak of hostilities. Such information, interpreted in the light of weather conditions prevailing during those particular seasons, will be useful in predicting what will happen under similar conditions at any future date, considering, of course, the limited number of years of record available on which to base the analogy.

2. Under the assumption of complete loss of weather data from USSR-controlled areas, any estimate of the stage of development of the various cereal crops in the USSR must be based on average dates. From these average dates, together with their extremes, it is believed that at the beginning of the season it will be possible to predict the stage of development within any specified region to within an approximate range of plus or minus 15 days. As the season progresses, it will be possible to narrow this range of estimate by a few days.

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